
III. *An Essay on the British Species of the Genus Melöe, with Descriptions of two exotic Species. By Wm. Elford Leach, Esq. F.L.S.*

Read June 19, 1810.

I WAS induced to examine the Genus Melöe from having in my cabinet all the British species hitherto discovered, and from observing the confusion which reigned throughout this Genus, one species having been confounded with another, or described twice under different names: to point out these errors is the intention of the following essay, which I now take the liberty of laying before the Society.

MELÖE.

Character Artificialis.

Antennæ submoniliformes, undecim-articulatæ, articulo secundo minore.

Palpi quatuor inæquales, subclavati.

Elytra apice rotundata, abdomine longè breviora, suturâ excurvatâ.

Alæ nullæ.

Pedes elongati, compressi.

Tarsi anteriores et medii quinque-articulati;
posteriores quadri-articulati.

Character Naturalis.

CORPUS oblongum, glabrum, immarginatum.

CAPUT latum, subhemisphæricum, inflexum, gibbum.

Mandibulæ rectæ, sæpiùs bifidæ.

Labium corneum, emarginatum, punctulatum.

Oculi laterales, oblongi, haud prominuli.

Antennæ sæpiùs pilosæ, inter oculos sitæ.

Palpi quatuor sub-clavati, articulo primo minori :

exteriores longiores, quadriarticulati, articulo ultimo ovato :

interiores breviores, tri-articulati, articulo ultimo dilatato, truncato.

TRUNCUS subquadratus, capite sæpiùs angustior.

Thorax punctatus.

Pectus punctulatum.

Epigastrium glabrum, punctatum.

Scutellum minutum, elytris tectum.

Pedes compressi.

Tarsi anteriores et medii 5-articulati ;
posteriores 4-articulati.

Elytra coriacea apice rotundata, abdomine breviora, suturâ excurvatâ.

Alæ nullæ.

ABDOMEN oblongum, sæpiùs molle ; segmentis octo.

LARVA adhuc latet.

VICTUS herbæ.

TEMPUS vernale, autumnale.

COLOR sæpiùs obscurus.

FAMILIÆ ab *antennis* desumptæ.

* *Antennæ* filiformes, breviores.

** *Antennæ* filiformes, tenuiores, elongatæ.

*** *Antennæ* extrorsum crassiores.

**** *Antennæ* medio crassiores, curvatæ.

Hæ familiæ fortè Genera naturalia.

Observatio. In familia quarta Mas Fœminæ antennis antennis amplectitur. (Copulatione observavit Georgius Sowerby.)

* *Antennæ*

* *Antennæ filiformes, breviores.*

1. MELÖE VARIEGATUS.

M. sub-æneus, variegatus, capite thoraceque punctatis, elytris scabrosis.

TAB. VI. Fig. 1. 2.

M. *Maialis.* Schæff. *Icon. tab. 3. fig. 6.*

Panz. *Ent. Germ. 350. 2.*

Faun. Germ. Init. 10. t. 13.

M. *Mayalis,* segmentis dorsalibus abdominis rubro-cupreis.

Oliv. Ins. no. 45. 6. tab. 1. fig. 4.

M. *variegatus.* Donovan *Brit. Ins. tab. 67.*

Mart. Eng. Ent. t. 39. fig. 1.

M. *scabrosus,* sub-auratus, capite thorace elytrisque rugosis scabris. *Marsh. Ent. Brit. 1. 483. 5.*

In M. *Maiali* thorax transversus, posticè emarginatus; abdominis segmenta cuprea, fasciâ transversâ viridi; corpore cupreo viridique vario, rugoso.

Latreille Gen. Crust. et Ins. tom. 2. p. 218.

Long. Corp. Maris 8 lin. ad 1½ unc.

Fœm. 1 unc. ad 1 unc. et 9 lin.

Habitat in Angliâ, Galliâ et Germaniâ, graminibus victitans.

DESCR. CAPUT nigro-cupreum, lateribus purpureo-violescentibus, punctis plurimis sæpè confluentibus impressum. *Labium* superius punctatum, violescens. *Antennæ* obscure æneo-violescentes, pilosæ.

THORAX transversus nigro-cupreus, punctis sæpè confluentibus impressus, marginibus elevatis violescentibus, posticè subemarginatus.

ELYTRA nigro-ænea punctis elevatis, sæpiùs confluentibus, nitidis, interstitiis obscurioribus.

ABDOMEN,

ABDOMEN, *Maris*, totum sublente scabrosum, segmentis dorsalibus anticè aurato-viridibus, posticè rubro-cupreis violescentibus; subtus aureo purpureoque variegatum.

Fœminæ, nigrum glabrum, maculâ scabrosâ, anticè aurato-viridi, posticè rufo-violescente; subtus aureo purpureo viridique variegatum.

PEDES nigri, obscurè violescentes, femoribus purpureo-violescentibus nitidis.

This insect, which is certainly the most beautiful of the genus, has been confounded by all the Continental writers who have noticed it, with *M. Maialis* of Linnæus, with which they seem, from their silence, to be unacquainted*. It was first taken in

* MELÖE MAJALIS.

M. ater, marginibus segmentorum dorsalium fulvis, antennis apice emarginatis.

TAB. VI. Fig. 3. 4.

M. Maialis, apterus, segmentis dorsalibus abdominis rubris. *Linn. Syst. Nat.* 2. 679. 2.
Syst. Nat. Gmel. 2017. 2.

M. maialis. *Fabr. Syst. Ent.* 259. 2. *Sp. Ins.* 1. 327. 2. *Mant. Ins.* 1. 215. 2.
Ent. Syst. emend. 1. b. 518. 2. *Syst. Eleut.* 2. 588. 3.

Long. Corp. *Maris* 1 unc. et $3\frac{1}{2}$ lin.

Fœm. 1 unc. et $7\frac{1}{2}$ lin.

Habitat in Europâ Australi, Lusitaniâ.

Mus. Britannico; Dom. Bracy Clark, Kirby, Leach, Smith, Marsham, Milne, MacLeay.

DESCR. Totum animal atrum, nisi margines segmentorum dorsalium. *Caput* glabrum lineâ longitudinali impressum, sub lente punctis minutis impressis adpersum. *Antennæ* subpilosæ, apice bifurcatæ. *Thorax* transversus, punctis minutis impressis adpersus, sæpius lineâ longitudinali obsolete impressâ, posticè marginatus emarginatusque. *Elytra* coriacea glabra, oculo armato sub-rugosa. *Abdomen* glabrum, marginibus segmentorum dorsalium fulvis, vel rubro-flavis. Pars singuli segmenti dorsalis sub lente minimè rugosa.

Obs. Insecto vivente, abdominis latera fulvescunt. *Dom. Sieber.*

This is undoubtedly *M. Maialis* of Linnæus, as there are specimens in his cabinet now in the possession of Dr. Smith; added to which, it agrees with his description, whilst *M. variegatus* does not. Fabricius and after him Gmelin erroneously refer to Schæffer's figure of *M. variegatus*; but as they use the words of Linnæus in their specific character, it must be considered as their *M. Maialis* also.

England

England by Mr. Crowe of Feversham, near that place, and since by Mr. Milne, near Margate in great plenty. Mr. Marsham in his *Entom. Britan.* has described it under the name of *M. scabrosus*, although it had before been described and figured by Mr. Donovan in his *British Insects* under another name, *M. variegatus*, which having the priority I have retained.

2. MELÖE CICATRICOSUS.

M. niger obscurus, capite thoraceque punctatis, elytris scabrosis.

TAB. VI. Fig. 5. 6.

M. cicatricosus, niger antennis brevibus, elytris parum cærulescentibus; lineis cicatricosis decussatis, interstitiis glabris nitidis. *Milne MSS.*

Long. Corp. Maris 1 unc.

Fœm. 1 unc. et 7 lin.

Habitat in Angliâ, mense Maio rarissimus. Captus a Dom. Milne prope Margate in Cantiâ.

Mus. Dom. MacLeay, Milne, Neale, Sowerby.

DESCR. CAPUT nigrum, punctis impressis nonnunquam confluentibus adpersum. *Labium* superius atrum, glabrum, nitidum, punctulatum. *Antennæ* atro-nigræ, pilosæ.

THORAX transversus niger, anticè latior, punctis confluentibus lineâque longitudinali impressus, posticè marginatus emarginatusque.

ELYTRA cærulescenti-nigra, punctis elevatis nonnunquam confluentibus, glabris, nitidis, interstitiis rugosis atris.

ABDOMEN supra nigro-atrum, maculâ rugosâ in singulo segmento; infra atrum, glabrum, nitidum, margine singuli segmenti posticè punctulato.

PEDES atrii concolores.

Obs. Elytra fœminæ posticè emarginata.

Mr. Milne,

Mr. Milne, of Surrey Place, first discovered this insect near Margate, in Kent, and to his liberality the abovementioned collections are indebted for their specimens. It is found in company with *M. variegatus*, from which insect it is however entirely distinct.

** *Antennæ filiformes, tenuiores, elongatæ.*

3. MELÖE AUTUMNALIS.

M. niger, capite thoraceque punctatis, elytris punctis erosis confluentibus.

TAB. VI. Fig. 7. 8.

M. autumnalis, niger lævis, elytris punctis excavatis raris.

Oliv. Ins. no. 45. sp. 4. tab. 1. fig. 2. a-b.

M. rugosus, corpore atro, elytris rugosis.

Marsh. Ent. Brit. 483. 4.

Long. Corp. 5 ad 9 lin.

Habitat in Europâ, in Angliâ prope Margate in Cantiâ, vulgarissimus, Syngenesiis victitans.

Mus. Dom. Francillon, Hachet, Hooker, Kirby, Latham, MacLeay, Leach, Marsham, Milne, Montagu, Sowerby.

DESCR. CAPUT subrugosum, nigrum, lineâ longitudinali impressum, sub lente punctis numerosis impressis sæpe confluentibus notatum. *Antennæ* capite quadruplo longiores, nigrae, subpilosæ.

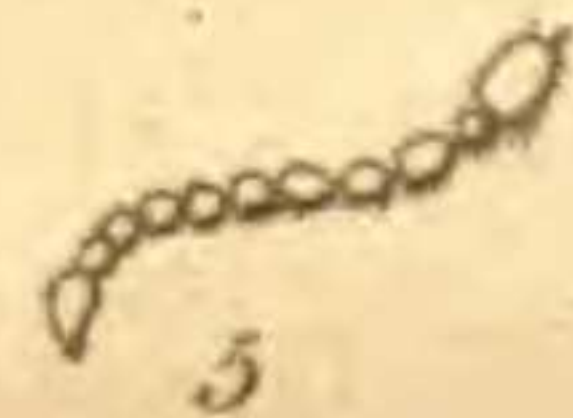
THORAX transversus niger, punctis confluentibus lineâque impressus, posticè marginatus emarginatusque.

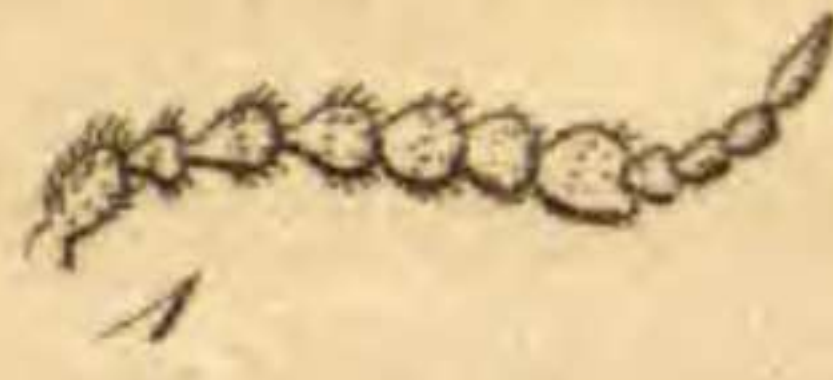
ELYTRA nigra punctis inæqualibus erosis confluentibus, interstitiis glabris nitidis.

ABDOMEN atrum, glabrum, nitidum, subtus punctulatum.

PEDES atri, glabri, nitidi.

This





This insect was first taken in England by the celebrated ornithologist Dr. Latham, from whose cabinet Mr. Marsham, conceiving it to be a new species, described it under the name of *M. rugosus*. It had however been figured and described in the invaluable work of Monsieur Olivier some years before: but probably that book had not reached England when Mr. Marsham wrote his *Entomologia Britannica*; which will account for his not quoting it.

It has been taken in great plenty, near Margate in Kent, by that assiduous entomologist Mr. George Milne, who favoured me with several remarks on its economy, which I shall transcribe from his letter: "Having last year brought from Margate several of that species of MELÖE which you suppose to be *M. autumnalis* of Olivier, I put a pair by themselves into a box, furnishing them frequently with fresh food. They copulated; and when the time came for depositing her eggs, the female not only passed through some earth which had adhered pretty firmly to the bottom of the box and to the roots of the plants on which she fed, but also tore up the paper which lined the box. From this it may be inferred that they deposit their eggs at a considerable depth in the earth; and there of course, when the larva breaks the egg, it can find no other food than the roots of grass."

*** *Antennæ extrorsum crassiores.*

4. MELÖE BREVICOLLIS.

M. niger, thorace transverso brevi, elytris subrugosis.

TAB. VI. Fig. 9.

M. brevicollis, atra thorace transverso elytris subpunctatis.

Panz. Ent. Germ. 1. p. 351. n. 6.

Faun. Germ. Init. 10. tab. 15.

M. brevicollis, nigro-violacea antennis extrorsum crassioribus, thorace brevissimo. *Paykul. Fn. Suec. 3. 362. 2.*

M. brevicollis, nigra, thorace transverso, posticè retuso, elytris subrugosis. *Fabr. Syst. Eleut. 2. 588. 7.*

Long. Corp. Fœm. $8\frac{1}{2}$ lin.

Maris, 7 lin.

Habitat in Angliâ; Mus. nost. In Germaniâ, Panzer et Fabr. Mus. Dom. Clark. In Hungariâ; Mus. Dom. Francillon. In Sueciâ, Paykul; Mus. Dom. Kirby.

DESCR. CAPUT glabrum, nitidum, punctis impressis lineâque notatum. *Antennæ* subclavatæ, pilosæ, atræ.

THORAX brevis, niger, transversus, nitidus, punctis lineâque longitudinali impressus, posticè valdè emarginatus.

ELYTRA subrugosa, nitida, apice rotundata.

ABDOMEN atrum, glabrum, maculâ subrugosâ nitidâ in singulo segmento, subtus nitidum, punctulatum.

PEDES atri, nitidi.

Obs. Vâr. β Mas, capite thorace elytris tibiis femoribusque vilescentibus.

This species appears to be a pretty general inhabitant of the Continent, if we may judge from the different authors who have noticed it. Mr. Kirby has received it from Major Gyllenhal, and Mr. Francillon from Hungary. Two specimens only, however, have hitherto been taken in England; one in a sandy meadow, about six miles below Tavistock, on the banks of the river Tavy, in Devonshire, four years ago, by myself; the other, last Spring, near Shaugh Bridge in the same county, in a similar situation.

**** *Antennæ medio crassiores, curvatæ.*

5. MELÖE GLABRATUS.

M. capite thorace elytrisque glabris, subpunctatis.

TAB. VII. Fig. 1. 2.

M. *punctatus*; violaceus, thorace posticè emarginato, elytris punctatis corporis ferè longitudine.

Marsh. Ent. Brit. 483. 6.

Long Corp. Fœm. 5 ad $7\frac{1}{2}$ lin.

Habitat in Angliâ, rarissimus.

Mus. Dom. Kirby, Leach, Marsham.

DESCR. CAPUT glabrum, nitidum, sub lente minimè punctatum.

Antennæ sæpiùs nigricantes, apice obscure piceæ.

THORAX nitidus, glaber, punctis impressis lineâque notatus, posticè marginatus emarginatusque, (sæpiùs puncto utrinque excavato.)

ELYTRA subglabra, punctis erosis sparsis.

ABDOMEN supra glaberrimum, subtus glabrum, punctulatissimum.

PEDES nitidi, colore incerto.

Var. α Capite thorace elytrisque sub-purpureo-violescentibus; thorace utrinque puncto excavato, marginibus punctatis; antennis vix violescentibus.

Long. Corp. 5 lin. Mus. Dom. Kirby:

β Capite antennisque nigro-violescentibus; thorace nigro-violescente, utrinque puncto excavato; elytris piceo-atris, lateribus violescentibus; pedibus violaceis.

Long. Corp. $7\frac{1}{2}$ lin. Mus. Dom. Marsham.

γ Capite æneo; thorace punctis duobus confluentibus, æneo; elytris virescentibus; abdomine supra æneo, subtus nigro-æneo; antennis æneo-nigris, nitidis.

δ Capite thoraceque glaberrimis, æneo-nitidis; thorace puncto utrinque excavato; elytris æneo-nigris; abdomine supra nigro, subtus æneo-virescente; pedibus nigris, obscure virescentibus.

Long. Corp. $6\frac{1}{2}$ lin. Mus. nostr.

The Rev. William Kirby first found this insect in England about the latter end of September, and from his museum Mr. Marsham described it under the name of *M. punctatus*; but that name (though very appropriate) having been given by Fabricius to a very different species*, prior to the publication of *Entomologia Britannica*, I have named it *M. glabratus*. The smallest figure is drawn from the identical specimen from which Mr. Marsham drew his description, the other from var. β. I have

* MELËE PUNCTATUS.

M. punctata, atra, thorace elytris que varioloso punctatis. *Fabr. Ent. Syst.* 2. 518. 4.
Syst. Eleut. 2. 588. 6.
M. punctata, atra, opaca, thorace plano quadrato, elytris punctis plurimis impressis.
Panz. Faun. Germ. Init. 10. tab. 16.

Long. Corp. 1 unc.

Habitat in Germaniâ, Lusitaniâ. Communicavit amicus Sieber.

Mus. Britannico; Dom. Leach, MacLeay, Milne.

Fabricius described this insect from a specimen in the British Museum; and in his description observes, "Habitat in Angliâ." This however being extremely doubtful, I have not ventured to insert it as such without further proof; it is therefore introduced, to exhibit in what respects it differs from the foregoing species. Panzer has given a tolerable figure of it, and observes, "alia est et omnimodò distincta species a Melœ punctata Fabricii." This however is incorrect, as his figure and description agree very well with the identical specimen still preserved in the British Museum, from which Fabricius described it.

seen but four specimens of this variable insect, and all of them are females; but from the structure of their antennæ I doubt not their belonging to this family. I cannot here avoid returning thanks to Dr. Latham for his great liberality in giving me his only specimens of this insect.

6. MELÖE VIOLACEUS.

M. violaceus, capite thoraceque punctatis, elytris rugosis.

TAB. VII. Fig. 3. 4. 5.

M. violaceus, corpore toto violaceo, thorace posticè emarginato.

Marsh. Ent. Brit. i. 482. 2.

M. tecta. Don. Brit. Ins. vol. vii. tab. 240.

Long. Corp. 6 lin. ad 1 unc. 3 lin.

Habitat in Angliâ, Maior vulgatissimus, herbis variis victitans.

DESCR. CAPUT violaceum, punctis plurimis distinctis impressis.

Antennæ subpilosæ, cæruleo-violescentes, apice piceæ.

THORAX violaceus, punctis impressis, posticè marginatus emarginatusque.

ELYTRA non valde rugosa, violacea, apice acutiora.

ABDOMEN atrum, supra maculâ violaceâ rugosâ in singulo segmento, subtus omni segmento posticè subrugoso violaceo.

PEDES violescentes.

β Thorace canaliculato, elytris magis rugosis quam in α , colore viridescente.

γ Thorace puncto utrinque excavato, alias β similis, at minor.
Mus. Dom. Kirby.

δ Antennis elytrisque longioribus, elytris minùs rugosis, abdomine subtus minùs violescente quam in var. α .

ϵ Multò minor, alias α similis.

The principal distinction between this and the following species is very slight; the thorax of this being more notched and margined behind than in *M. proscarabæus*, and its colour more violet. *M. similis* of Mr. Marsham is certainly no more than a variety, differing in having longer elytra, a circumstance often occurring in the different species of the genus.

7. MELÖE PROSCARABÆUS.

M. niger, capite thoraceque punctatis, elytris rugosis, lateribus capitis, thoracisque pedibus antennisque violescentibus.

TAB. VII. Fig. 6. 7.

Scarabæus mollis e nigra viola nitens.

List. Scarab. Ang. 392. 27.

M. proscarabæus, corpore violaceo. *Linn. Fn. Sv.* 227. 826.

Syst. Nat. ii. 697. 1.

Fabr. Syst. Ent. 259. 1.

Fabr. Sp. Ins. ii. 327. 1.

Mant. Ins. i. 215. 1.

Gmel. Syst. Nat. 2017. 1.

Villars Ent. i. 397. 1.

M. proscarabæus, corpore violaceo, scabro.

Oliv. iii. no. 45. 5. tab. 1. f. 1.

M. proscarabæus, corpore violaceo.

Fabr. Ent. Syst. i. b. 517. 1.

Syst. Eleut. ii. 587. 1.

M. proscarabæus, corpore suprâ atro, subtùs violaceo.

Marsh. Ent. Brit. i. 481. 1.

Long Corp. Maris 1 unc. 2 lin.

Fœm. 1 unc. et 7 lin.

Obs. Sæpe variant staturâ minori.

Habitat

Habitat in Angliâ, Galliâ, Germaniâ, vulgatissimus, plantis victicans.

DESCR. CAPUT punctatum, lateribus violescentibus. *Antennæ* violescentes, apice piceæ.

THORAX punctatus lateribus violescentibus posticè marginatus. *Pectus* et *Epigastrium* violescentia.

ELYTRA rugosa, nigra, minimè nitida.

ABDOMEN maculâ rugosâ in singulo segmento supra; subtus rugosum marginibus segmentorum exceptis.

PEDES violacei.

β Capite thoraceque violescentibus.

There can be no doubt that this is the *M. proscarabæus* of Linnæus, as it agrees exactly with the description in the *Fauna Suecica*. In the specific character he describes it, "corpore violaceo," but in his description he observes, "totum animal molle est et atrum; pedes, antennæ et abdomen paulo magis violacea." The former character applies to *M. violaceus*, and the latter to *M. proscarabæus*, which he most probably considered as the same species. Latreille is also of this opinion; but erroneously considers *M. punctatus* in the same light.

8. MELÖE TECTUS.

M. niger, capite thoraceque punctatis, elytris subrugosis elongatis, antennis medio crassioribus.

TAB. VII. Fig. 8. 9.

M. tecta, atra, elytris abdomine haud brevioribus, antennis medio crassissimis.

Panz. Faun. Germ. 10. 14.

Long. Corp. Maris, 9½ lin.

Fœm. 10 lin.

Habitat in Angliâ et Germaniâ infrequens.

DESCR.